STATEMENT OF BASIS
KSC PRESS SITE SWMU 74
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
KENNEDY SPACE CENTER

PURPOSE OF STATEMENT OF BASIS

This Statement of Basis (SB) has been developed to inform and give the public an opportunity to comment on a proposed remedy to address contamination at the KSC Press Site[1]. A Kennedy Space Center (KSC) Remediation Team consisting of National Aeronautics and Space Administration (NASA), Florida Department of Environmental Protection (FDEP) has determined that the proposed remedy is cost effective and protective of human health and the environment. However, prior to implementation of the proposed remedy, the KSC Remediation Team would like to give an opportunity for the public to comment on the proposed remedy. At any time during the public comment period, the public may comment as explained in the "How Do You Participate" section of this SB. After the end of the public comment period, the KSC Remediation Team will review all comments and issues raised in the comments and determine if there is a need to modify the proposed remedy prior to implementation.

WHY IS A REMEDY NEEDED?

The results of the Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) indicated that several volatile organic compounds (VOCs) are present in groundwater. In addition, free product (diesel fuel) was found in groundwater at a single location prior to the implementation of an Interim Measure (IM) to remove petroleum contaminated soil. These constituents could be potentially harmful to human health if this water was used for human consumption now or in the future. All groundwater contamination at the Press Site has been incorporated into the Mobile Launch Platform/Vehicle Assembly Building Area (SWMU #56) Statement of Basis (KSC-TA-6663). Following the IM and a review of the MLP/VAB Area groundwater data it has been determined that the petroleum contamination has attenuated below Groundwater Cleanup Target Levels (GCTLs) and therefore is no longer considered a site contaminant. In addition, the results of the RFI indicated that arsenic was detected in soil at concentrations above the FDEP residential Soil Cleanup Target Levels (SCTLs), which could potentially be harmful to human health.

HOW DO YOU PARTICIPATE?

The KSC Remediation Team solicits public review and comment on this SB before implementing the proposed remedy.

The Cleanup Remedy

The proposed cleanup remedy for the KSC Press Site includes the following components:

- Incorporating VOC and groundwater contamination into the MLP/VAB RCRA Corrective Measures Implementation
- Institutional controls to prohibit the use of groundwater as a potable water supply and prohibit residential exposure to soils.

[1] In accordance with RCRA §7004(b), this Statement of Basis summarizes the proposed remedy for the NASA KSC Press Site. For detailed information on the site, consult the KSC Press Site RFI Report, which is available for review at the information repository located at the NASA Document Library, Merritt Island Public Library, 1195 N. Courtenay Pkwy, Merritt Island FL 32953, Telephone: (321) 455-1369.

The remedy for the KSC Press Site will eventually be incorporated into the Hazardous and Solid Waste Amendments (HSWA) Permit for Kennedy Space Center (KSC). The public comment period for this SB and proposed remedy will begin on the date of publication for notice of availability of the SB in major local newspapers of general circulation and end 45 days thereafter. If requested during the comment period, the KSC Remediation Team will hold a public meeting to respond to any oral comments or questions regarding the proposed remedy. To request a hearing or provide comments, contact the following person in writing within the 45-day comment period:

Mr. John R. Armstrong, P.G.
FDEP - Bureau of Waste Cleanup
2600 Blair Stone Road, MS 4535
Tallahassee, FL 32399-2400
Email: John.Armstrong@dep.state.fl.us
Telephone: (850) 245-8981
Fax: (850) 245-8976

The HSWA Permit, SB, and associated administrative file, including the RFI Report, will be available to the public for viewing and copying at:

NASA Document Library
Merritt Island Public Library
1195 N. Courtenay Pkwy
Merritt Island, FL 32953
Telephone: (321) 455-1369

To request further information, you may contact one of the following people:

Mr. Harold Williams
Remediation Program Manager
Environmental Program Office
Mail Code: TA-C3
Kennedy Space Center, FL 32899
E-mail: Harold.G.Williams@nasa.gov
Telephone: (321) 867-8411

Mr. John R. Armstrong, P.G.
FDEP - Bureau of Waste Cleanup
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Email: John.Armstrong@dep.state.fl.us
Telephone: (850) 245-8981
Fax: (850) 245-8976

FACILITY DESCRIPTION

NASA established the KSC as the primary launch site for the space program. These operations have involved the use of toxic and hazardous materials. Under the RCRA and applicable HSWA permit (Permit No. FL6800014585) issued by the FDEP and/or EPA, KSC was required to perform an investigation to determine the nature and extent of contamination from Solid Waste Management Unit (SWMU) No. 74, the KSC Press Site.

SITE DESCRIPTION AND HISTORY

The KSC Press Site is a NASA-operated facility that was constructed in the late 1960s for support of the Apollo Space Program. The Press Site consists of a series of structures that were constructed from 1967 to 1968 and include: the grand stand, Press Site Communications Control Building (K7-1205), Cable Terminal Building (K7-1153), and ABC News Media Building (K7-1205-C). Subsequent construction from 1968 to present include: the Transformer Building (K7-1205-C), NASA News Center (K7-1207), additional news

service trailers, and News Building (K7-1205-F). A geodesic dome structure was also present at the site from 1976 until the early 1990s. KSC was required to perform an investigation to determine the nature and extent of contamination from Solid Waste Management Unit (SWMU) No.74 KSC Press Site (Figure 1). Investigations conducted at the site include:

- January 1987 through 2000: Quarterly surface water sampling was conducted as a part of the KSC Surface Water Monitoring Project. In 1997, no exceedances of the Florida Surface Water Criteria listed in Chapter 62-302, Florida Administration Code (FAC) were reported however, low levels of lead were detected. In 1998 arsenic was detected above the Surface Water Cleanup Target Level.

- August 1994: Soil samples were taken around several temporary waste holding tanks that were leaking onto the ground surface at the Press Site. All concentrations were below FDEP Residential Criteria SCTLs or EPA Region IV Risk Base Concentrations (RBCs). A Press Site Photographic Trailer Spill Report was prepared on August 30, 1994.

- November 1995: The Environmental Sanitation/Pollution Control (ESPC) responded to a diesel fuel spill at the Press Site Generator Building No. K7-1203 located at the southwest corner of the site. After removing two backup generators, a stained area six feet in diameter was determined to be the result of long term leaks and spills of diesel fuel used in the generators. A total of nineteen 55-gallon drums of contaminated soil were removed.

- April 1998: Site Assessment (SA) and Confirmatory Sampling (CS) activities were focused on identifying potential contamination in soil and groundwater. Results indicated the presence of metals, Semi-Volatile Organic Compounds (SVOCs), cis-1,2-dichloroethylene and Vinyl Chloride (VC). The results of the SA indicated the need for confirmatory groundwater, soil, and surface water sampling at the Press Site due to criteria exceedances.

- December 1998-January 1999: Arsenic was detected above the Soil Cleanup Target Level and a Draft CS Work Plan was presented at the KSC Team Meeting.

- April 2000: CS results indicated the presence of VC in groundwater.

- January 2001 – March 2004: The RFI was conducted to characterize the nature and extent of contamination at the site. Samples of soil, surface water and groundwater were collected and analyzed to evaluate potential risks to human health and ecological receptors. RFI results indicated VC and free product (diesel fuel) in groundwater, and polynuclear aromatic hydrocarbons (PAHs) and polychlorinated biphenyl (PCB), arsenic, and silver in soil.

- November 2002: KSC Remediation Team decided to incorporate the VOC and petroleum groundwater plumes identified at the Press Site into the MLP/VAB Area (SWMU #56).

- August 2003: The ecological risk assessment (ERA) indicated that no un-

acceptable risk exists at the site for ecological receptors.

- March 2005: An IM was conducted to remove free product, PAHs, and PCB impacted soil.

- February 2006: The VAB Area LTM Report recommended no further action for the petroleum contaminated groundwater at the KSC Press Site (SWMU #74).

SUMMARY OF SITE RISK

As part of the RFI activities, risk assessments were completed in accordance with KSC's Remediation Team Risk Assessment Decision Process Document (DPD). The ERA was performed in accordance with the eight-step process described in the EPA's "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments," dated 1997.

Post IM human health Chemicals of Concern (COCs) were limited to VOCs (evaluated in KSC's MLP/VAB RFI) and petroleum contamination in groundwater and arsenic in soil. For a complete list of COCs in soil see Table 1. For a complete list of COCs in groundwater see Table 2. Unacceptable risks to potential future residential receptors were identified for exposure to soils, therefore, a residential Land Use Control Implementation Plan (LUCIP) will be applied to the site to prevent potential future residential use.

WHAT ARE THE REMEDY OBJECTIVES AND LEVELS?

The remedial action objective (RAO) is to protect humans from exposure to soil contaminants that exceed FDEP residential-use cleanup target levels by limiting site access only to industrial workers. Table 1 lists the COCs present in soil and Table 2 lists the COCs present in groundwater at the KSC Press Site. The first column lists the chemical name, the second column lists the range of concentrations detected in the soil at the Press Site following the IM, and the last column presents the FDEP cleanup target levels.

Table 1

Site Related Chemical of Concern (COCs)	Range of Detection (mg/kg)	Residential SCTL[1]	Industrial SCTL[1]
Arsenic	0.5 - 17.0	2.1	12.0

[1] Cleanup levels are SCTLs from Florida Administrative Code 62-777

Table 2

Site Related Chemical of Concern (COCs)	Range of Detection (g/L)	Site Specific Cleanup Level[1]
Vinyl Chloride	2.2-4.1	1

[1] Cleanup levels are GCTLs from Florida Administrative Code 62-777

REMEDIAL ALTERNATIVES FOR THE KSC PRESS SITE

Remedial alternatives are different combinations of plans or technologies to restrict access, and to contain or treat contamination to protect human health and the environment. Due to minimized human exposure based on infrequent use of the site, limited nature of the soil contamination following the IM, and that the 95% Upper Confidence Limit for arsenic at the site is

less than the current industrial SCTL, only one alternative was considered for the KSC Press Site and is summarized below.

- Land Use Controls

Land Use Controls: Institutional land use controls would be implemented to limit access to site soils by individuals other than industrial workers. NASA, EPA, and the FDEP have entered into a Memorandum of Agreement (MOA) that outlines how institutional controls will be managed at NASA[2]. Controls will include periodic inspection, condition certification and agency notification. The soil use control area as shown on Figure 2 will be under institutional control.

EVALUATION OF REMEDY

The selected remedy was evaluated to determine if it will comply with EPA's four threshold criteria for corrective measures. The four threshold criteria for corrective measures are:

- overall protection of human health and the environment;
- attain media cleanup standards;
- control the sources of releases; and
- comply with standards for management of wastes.

Land Use Controls meet the threshold criteria and were determined to be the best overall approach with respect to the balancing criteria.

WHAT IMPACTS WOULD THE REMEDY HAVE ON THE LOCAL COMMUNITY?

There would be no impacts to the local community because administrative actions to limit the access to the site are consistent with current operating procedures.

WHY DOES THE KSC REMEDIATION TEAM RECOMMEND THIS REMEDY?

The team recommends the proposed remedy because it is an effective way to prevent exposure to contaminants. The proposed remedy meets the threshold and balancing criteria for corrective measures.

NEXT STEPS

The KSC Remediation Team will review all comments on this SB to determine if the proposed remedy needs modification prior to implementation and prior to incorporating the proposed remedy into KSC's HSWA permit. If the proposed remedy is determined to be appropriate for implementation, then a long term monitoring program will be initiated, and a Land Use Control Implementation Plan will be developed to incorporate the institutional controls at this site.

2. By separate MOA effective February 23, 2001, with the EPA and FDEP, KSC, on behalf of NASA, agreed to implement Center-wide, certain periodic site inspections, condition certification, and agency notification procedures designed to ensure the maintenance by Center personnel of any site-specific LUCs deemed necessary for future protection of human health and the environment. A fundamental premise underlying execution of that agreement was that through the Center's substantial good faith compliance with the procedures called for herein, reasonable assurances would be provided to EPA and FDEP as to the permanency of those remedies which included the use of specific LUCs. Although the terms and conditions of the MOA are not specifically incorporated or made enforceable herein by reference, it is understood and agreed by NASA KSC, EPA and FDEP that the contemplated permanence of the remedy reflected herein shall be dependent upon the Center's substantial good faith compliance with the specific LUC maintenance commitments reflected herein. Should such compliance not occur or should the MOA be terminated, it is understood that the protectiveness of the remedy concurred in may be reconsidered and that additional measures may need to be taken to adequately ensure necessary future protection of human health and the environment.

FIGURE 1 LOCATION MAP
PRESS SITE, KENNEDY SPACE CENTER, FLORIDA

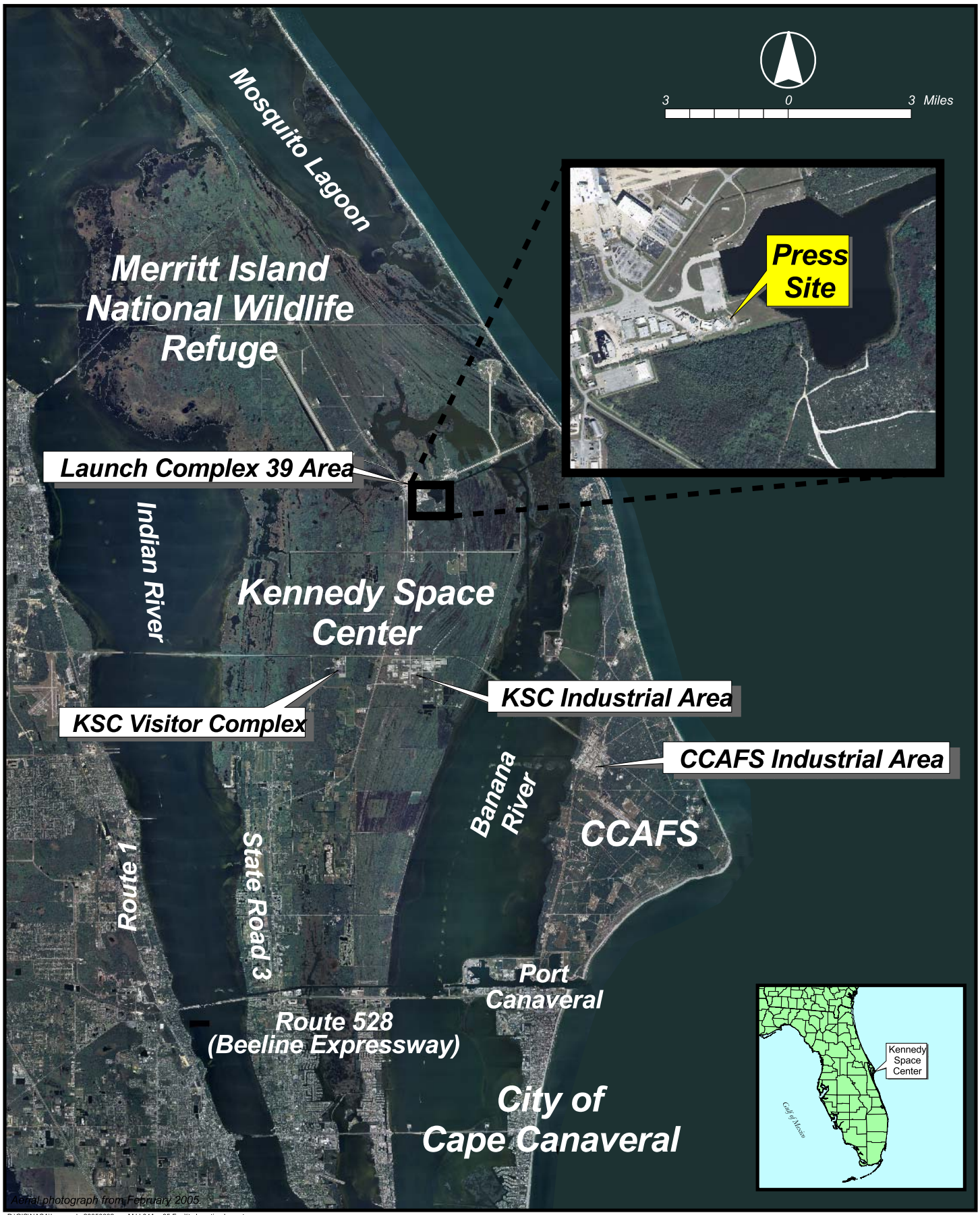

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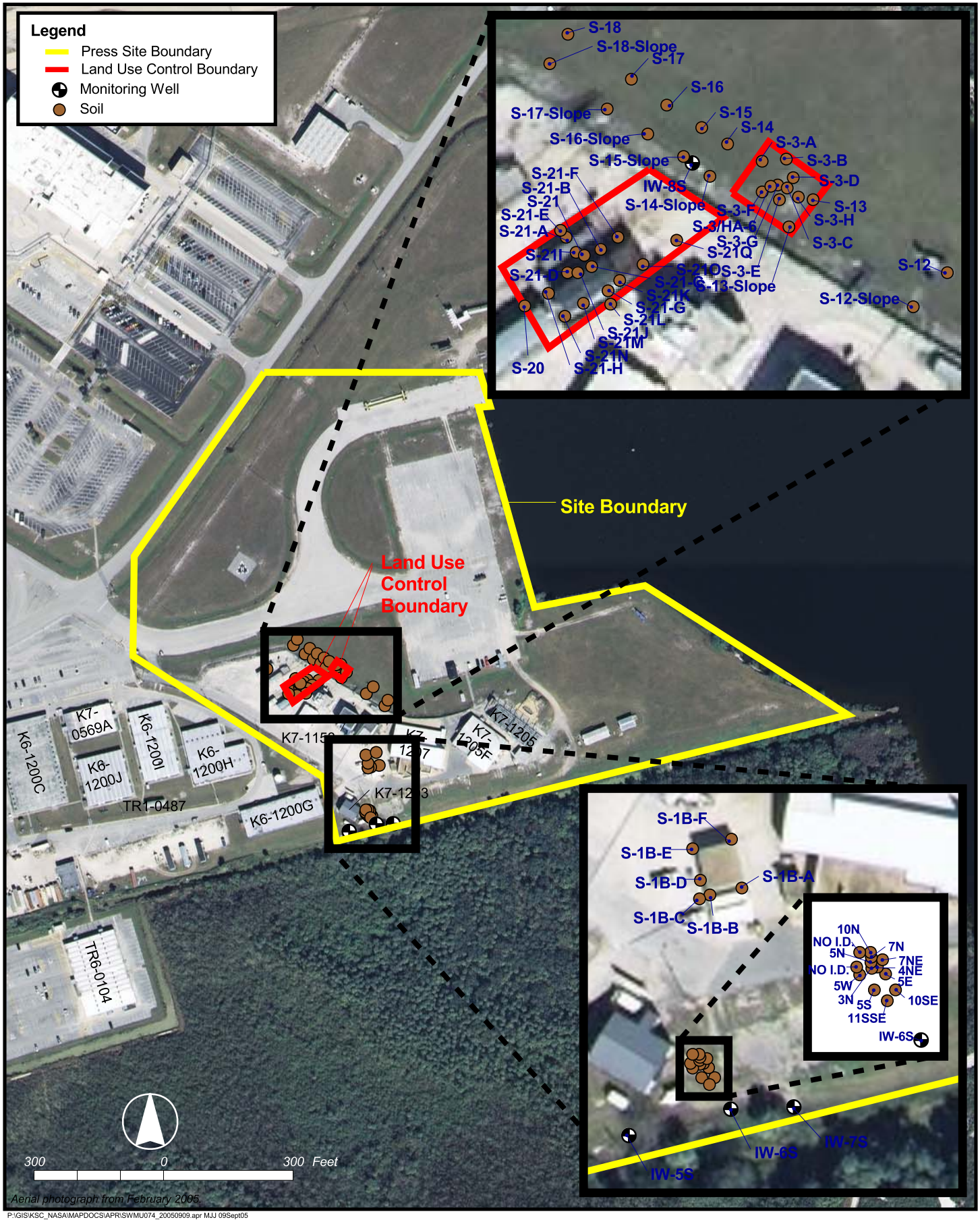
FIGURE 2 PROPOSED LAND USE CONTROL MAP
PRESS SITE, KENNEDY SPACE CENTER, FLORIDA



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